1643

*INPUT SET: S28508.raw*

> **This Raw Listing contains the General
> Information Section and up to the first 5 pages.**

```
 1                                    SEQUENCE LISTING
 2
 3     (1)      General Information:
 4
 5        (i)   APPLICANTS:   MINETTI, CONCEICAO;
 6                            MICHON, FRANCIS;
 7                            PULLEN, JEFFREY K.;
 8                            POLDVINO-BODNAR, MARYELLEN;
 9                            LIANG, SHU-MEI;
10                            TAI, JOSEPH Y.
11
12      (ii)   TITLE OF INVENTION: MODIFIED IMMUNOGENIC
13             PNEUMOLYSIN COMPOSITIONS AS VACCINES
14
15     (iii)   NUMBER OF SEQUENCES:  18
16
17      (iv)   CORRESPONDENCE ADDRESS:
18             (A)   ADDRESSEE:  MORGAN & FINNEGAN, L.L.P.
19             (B)   STREET:  345 PARK AVENUE
20             (C)   CITY:  NEW YORK
21             (D)   STATE:  NEW YORK
22             (E)   COUNTRY:  USA
23             (F)   ZIP:  10154
24
25       (v)   COMPUTER READABLE FORM:
26             (A)   MEDIUM TYPE:  FLOPPY DISK
27             (B)   COMPUTER:  IBM PC COMPATIBLE
28             (C)   OPERATING SYSTEM:  PC-DOS/MS-DOS
29             (D)   SOFTWARE:  MICROSOFT WORD 97
30
31      (vi)   CURRENT APPLICATION DATA:
32             (A)   APPLICATION NUMBER:  09/120,044
33             (B)   FILING DATE:  1998-07-21
34             (C)   CLASSIFICATION:
35
36     (vii)   PRIOR APPLICATION DATA:
37             (A)   APPLICATION NUMBER: 60/053,306
38             (B)   FILING DATE:  1997-07-21
39
40     (vii)   PRIOR APPLICATION DATA:
41             (A)   APPLICATION NUMBER: 60/073,456
42             (B)   FILING DATE:  1998-02-02
43
44    (viii)   ATTORNEY/AGENT INFORMATION:
45             (A)   NAME: DARRYL H. STEENSMA
46             (B)   REGISTRATION NUMBER: 43,155
```

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47
48
49
50
51
52
53
54              (C)   REFERENCE/DOCKET NUMBER:   1758-4036US2
55
56     (ix)   TELECOMMUNICATION INFORMATION:
57            (A)   TELEPHONE:  (212) 758-4800
58            (B)   TELEFAX:  (212) 751-6849
59            (C)   TELEX:  421792
60
61
62  (2) INFORMATION FOR SEQ ID NO:1:
63
64        (i) SEQUENCE CHARACTERISTICS:
65            (A) LENGTH:  1413
66            (B) TYPE:  nucleic acid
67            (C) STRANDEDNESS:  double
68            (D) TOPOLOGY:  linear
69
70       (ii) MOLECULE TYPE:  cDNA
71
72       (vi) ORIGINAL SOURCE:
73            (A) ORGANISM: S. pneumoniae
74
75       (xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:
76
77  atggcaaata aagcagtaaa tgactttata ctagctatga          40
78
79  attacgataa aaagaaactc ttgacccatc agggagaaag          80
80
81  tattgaaaat cgtttcatca aagagggtaa tcagctaccc         120
82
83  gatgagtttg ttgttatcga aagaaagaag cggagcttgt         160
84
85  cgacaaatac aagtgatatt tctgtaacag ctaccaacga         200
86
87  cagtcgcctc tatcctggag cacttctcgt agtggatgag         240
88
89  accttgttag agaataatcc cactcttctt gcggtcgatc         280
90
91  gtgctccgat gacttatagt attgatttgc ctggtttggc         320
92
93  aagtagcgat agctttctcc aagtggaaga tcccagcaat         360
94
95  tcaagtgttc gcggagcggt aaacgatttg ttggctaagt         400
96
97  ggcatcaaga ttatggtcag gtcaataatg tcccagctag         440
98
99  aatgcagtat gaaaaaatca cggctcacag catggaacaa         480
```

# RAW SEQUENCE LISTING
## PATENT APPLICATION   *US/09/120,044*

*INPUT SET: S28508.raw*

```
100
101
102
103
104
105
106
107
108    ctcaaggtca agtttggttc tgactttgaa aagacaggga        520
109
110    attctcttga tattgatttt aactctgtcc attcaggcga        560
111
112    aaagcagatt cagattgtta attttaagca gatttattat        600
113
114    acagtcagcg tagacgctgt taaaaatcca ggagatgtgt        640
115
116    ttcaagatac tgtaacggta gaggatttaa aacagagagg        680
117
118    aatttctgca gagcgtcctt tggtctatat ttcgagtgtt        720
119
120    gcttatgggc gccaagtcta tctcaagttg gaaaccacga        760
121
122    gtaagagtga tgaagtagag gctgcttttg aagctttgat        800
123
124    aaaaggagtc aaggtagctc ctcagacaga gtggaagcag        840
125
126    attttggaca atacagaagt gaaggcggtt attttagggg        880
127
128    gcgacccaag ttcgggtgcc cgagttgtaa caggcaaggt        920
129
130    ggatatggta gaggacttga ttcaagaagg cagtcgcttt        960
131
132    acagcagatc atccaggctt gccgatttcc tatacaactt        1000
133
134    cttttttacg tgacaatgta gttgcgacct ttcaaaatag        1040
135
136    tacagactat gttgagacta aggttacagc ttacagaaac        1080
137
138    ggagatttac tgctggatca tagtggtgcc tatgttgccc        1120
139
140    aatattatat tacttggaat gaattatcct atgatcatca        1160
141
142    aggtaaggaa gtcttgactc ctaaggcttg ggacagaaat        1200
143
144    gggcaggatt taacggctca ctttaccact agtattcctt        1240
145
146    taaaagggaa tgttcgtaat ctctctgtca aaattagaga        1280
147
148    gtgtaccggg cttgcttggg aatggtggcg tacggtttat        1320
149
150    gaaaaaaccg atttgccact agtgcgtaag cggacgattt        1360
151
152    ctatttgggg aacaactctc tatccgcagg tagaagataa        1400
```

*INPUT SET: S28508.raw*

```
153
154
155
156
157
158
159
160
161   ggtagaaaat gac                                          1413
162
163
164   (2) INFORMATION FOR SEQ ID NO:2:
165
166       (i) SEQUENCE CHARACTERISTICS:
167           (A) LENGTH:  1413
168           (B) TYPE:  nucleic acid
169           (C) STRANDEDNESS:  double
170           (D) TOPOLOGY:  linear
171
172      (ii) MOLECULE TYPE:  cDNA
173
174      (vi) ORIGINAL SOURCE:
175           (A) ORGANISM: S. pneumoniae
176
177      (xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:
178
179   atggcaaata aagcagtaaa tgactttata ctagctatga              40
180
181   attacgatan aaanaaactc ttgacccatc agggagaaag              80
182
183   tattgaaaat cgtttcanca aagagggtaa tcagctaccc             120
184
185   gntgagtttg ttgntancga aagaaagaag cggagcttgt             160
186
187   cgacaaatac aagtgatatt nctgtancag ctaccnacga             200
188
189   cagtcgcctc tatcctggag cacttctcgt agtggatgag             240
190
191   accttgtnag agaataatcc cactcttctt gcggtngatc             280
192
193   gtgctccgat gacttatagt antgntttgc ctggtttggc             320
194
195   aagtagcgat agctttctcc aagtggaaga ncccagcaat             360
196
197   tcaagtgttc gcggagcggn anacgatttg ttggctaagt             400
198
199   ggcatcaaga ttatggtcag gtcaataatg tcccagctag             440
200
201   aangcagtat gaaaaaatna cggctcacag catggaacaa             480
202
203   ctcaaggtca agtttggttc tgactttgaa aagncaggga             520
204
205   attctcttga tattgatttt aactctgtcc attcaggnga             560
```

```
206
207
208
209
210
211
212
213
214    aaagcngatt cagattgtta atnttaagca gatttattat              600
215
216    acagtcagcg tagacgctgt taaaaatcca ggagatgtgt              640
217
218    ttcaagatac tgtaacggta gaggatttaa aacagagagg              680
219
220    aatttctgca gagcgtcctt tggtctatat ttcgagngtt              720
221
222    gcttatgggc gccaagtcta tctcaagttg gaaaccacga              760
223
224    gtangagtgn tgaagtagag gctgcttttg aagctttgat              800
225
226    aaaaggagtc aaggtagctc ctcagacaga gtggaagcag              840
227
228    attttggaca atacagaagt gaaggcggtt attttagggg              880
229
230    gcgacccaag ttcgggtgcc cgagttgtaa caggcaaggt              920
231
232    ggatatggta gaggacttga ttcaagaagg cagtcgcttt              960
233
234    acagcagatc atccaggctt gccgatttcc tatacaactt             1000
235
236    ctttttttacg tgacaatgta gttgcgacct ttcaaaanag            1040
237
238    tacagactat gttgagacta aggttacagc ttacagaaac             1080
239
240    ggagatttac tgctggatca tagtggtgcc tatgttgccc             1120
241
242    aatattatat tacttggnat gaattatcct atgatcatca             1160
243
244    aggtaaggaa gtcttgactc ctaaggcttg ggacagaaat             1200
245
246    gggcaggatt tnacggctca ctttaccact agtattcctt             1240
247
248    taaaagggaa tgttcgtaat ctctctgtca aaattagaga             1280
249
250    gtgtaccggg cttgcntggg aatggtggcg tacggtttat             1320
251
252    gaaaaaaccg atttgccact agtgcgtaag cggacgattt             1360
253
254    ctatttgggg aacaactctc tatccncagg tagangataa             1400
255
256    ggtagaaaat gac                                          1413
257
258
```

# SEQUENCE VERIFICATION REPORT
## PATENT APPLICATION   *US/09/120,044*

*INPUT SET: S28508.raw*

| Line | Error | Original Text |
| --- | --- | --- |